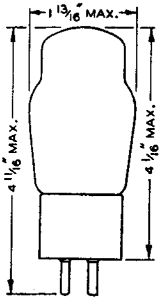
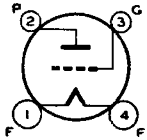


RCA-45

POWER AMPLIFIER

The 45 is a power-amplifier triode of the filament type capable of supplying large undistorted output in a-c operated receivers.



CHARACTERISTICS

Filament Voltage (A. C. or D. C.)	2.5	Volts
Filament Current	1.5	Amperes
Grid-Plate Capacitance	7	μμf
Grid-Filament Capacitance	4	μμf
Plate-Filament Capacitance	3	μμf
Bulb		ST-14
Base		Medium 4-Pin

As Single-Tube Class A_1 Amplifier

Filament Voltage (A. C.)			2.5	Volts
Plate Voltage	180	250	275 *max.*	Volts
Grid Voltage*	−31.5	−50	−56	Volts
Plate Current	31	34	36	Milliamperes
Plate Resistance	1650	1610	1700	Ohms
Amplification Factor	3.5	3.5	3.5	
Transconductance	2125	2175	2050	Micromhos
Load Resistance	2700	3900	4600	Ohms
Self-Bias Resistor	1020	1470	1550	Ohms
Undistorted Power Output	0.825	1.6	2.0	Watts

* Grid volts measured from mid-point of a-c operated filament. Self-bias is advisable in all cases, required if grid d-c resistance (max. value of 1.0 megohm) is used in grid circuit.

As Push-Pull Class AB_2 Amplifier (Two Tubes)

Values are for two tubes.

	Fixed Bias	*Self-Bias*	
Filament Voltage (A. C.)	2.5	2.5	Volts
Plate Voltage (Maximum)	275	275	Volts
Grid Voltage	−68	—	Volts
Self-Bias Resistor	—	775	Ohms
Zero-Signal Plate Current	28	72	Milliamperes
Maximum-Signal Plate Current	138	90	Milliamperes
Load Resistance (Plate-to-plate)	3200	5060	Ohms
Total Harmonic Distortion	5	5	Per cent
Power Output	18	12	Watts

INSTALLATION AND APPLICATION

For installation refer to INSTALLATION on type **2A3**.

As a **power amplifier** (Class A_1), the 45 may be used either singly or in push-pull. Typical operating conditions are given under CHARACTERISTICS.

In a **push-pull** Class AB_2 stage, the 45 is operated under conditions such that a small amount of grid current flows during the most positive swing of the input signal and the second harmonic distortion is cancelled by virtue of the push-pull circuit. A driver stage, consisting of one 56 operated at 250 volts on the plate, will drive two 45's in push-pull (fixed-bias or self-bias) to the stated output values. A step-down interstage transformer of suitable design is required.

A family of plate characteristic curves is given on page 143.